PROGRAM CHARTER

FOR

AQUACULTURE

Program Manager: Michael Rubino
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1. EXECUTIVE SUMMARY

NOAA's Aquaculture Program is a matrix-managed, multi-line office program established in 2003 to develop a science and technology based regulatory framework for a well-managed and productive U.S. marine aquaculture industry. The Aquaculture Program exists to:

- achieve long-standing national priorities with respect to aquaculture research and management that were identified in the National Aquaculture Act of 1980, as amended, and the FAO Code of Conduct for Responsible Fisheries;
- advance the goals of the aquaculture policies adopted by the Department of Commerce and NOAA in the late 1990s;
- implement the U.S. Ocean Action Plan approved in 2004 to implement the recommendations of the U.S. Commission on Ocean Policy; and
- implement Article 9 of the FAO Code of Conduct and collaborate with international partners under bilateral agreements.

The Aquaculture Program supports NOAA's Ecosystems Mission Goal - to protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management. The program advances both of the Goal's outcomes.

- The Aquaculture Program promotes healthy and productive coastal and marine ecosystems that benefit society.
- The Aquaculture Program contributes to a well-informed public that acts as a steward of coastal and marine ecosystems.

Aquaculture Program activities occur primarily at NOAA headquarters and the NOAA Library in Silver Spring, Maryland; at NOAA Fisheries laboratories in Milford, Connecticut; Manchester, Washington; Galveston, Texas; and Auke Bay, Alaska; and at the National Ocean Service laboratory in Beaufort, North Carolina. Additional aquaculture-related activities take place at other NOAA laboratories and regional offices.

Aquaculture Program URL: http://www.aquaculture.noaa.gov

2. PROGRAM REQUIREMENTS

A. Requirement Drivers:

1. Legislative Authorities

a) The National Aquaculture Act of 1980 - The authority given to the Secretary of Commerce in the National Aquaculture Act of 1980 is delegated to NOAA. This requires NOAA to coordinate with other federal agencies through the Joint Subcommittee on Aquaculture (JSA), to represent the Department of Commerce on the JSA's Executive Committee, and to participate in the development of a National Aquaculture Development Plan. Specific requirements for the Secretary of Commerce/NOAA include:

- consulting and cooperating with interested persons, Federal and State agencies, and regional fishery management councils;
- encouraging the implementation of aquaculture technology in the rehabilitation and enhancement of publicly owned fish and shellfish stocks as well as in the development of private commercial aquaculture enterprises;
- prescribing such regulations as may be necessary to carry out the National Aquaculture Development Plan; and
- providing advisory, educational, and technical assistance (including training) with respect to aquaculture to interested persons.

The Act also provides discretionary authority to conduct tests and analyses for purposes of assessing the biological, technical, and economic feasibility of any aquaculture system.

b) National Offshore Aquaculture Act of 2005 (S. 1195) - As called for in the U.S. Ocean Action Plan (see below), the Administration has proposed a National Offshore Aquaculture Act (S. 1195) to establish and implement a regulatory framework for offshore aquaculture in the U.S. Exclusive Economic Zone. The proposed legislation gives the Secretary of Commerce certain authorities, which would be delegated to NOAA and require the Aquaculture Program to:

- issue permits and develop/implement a coordinated permit process in cooperation with other federal agencies;
- develop environmental requirements;
- establish an integrated, multidisciplinary, scientific research and development program to further offshore aquaculture technologies and industry development that are compatible with the protection of marine ecosystems; and
- conduct research and development in partnership with offshore aquaculture site permit holders.

c) Coastal Zone Management Act of 1972, as amended - The Coastal Zone Management Act of 1972, as amended, requires NOAA to provide assistance to coastal states to support comprehensive planning, conservation, and management for living marine resources, including planning for the siting of aquaculture facilities within the coastal zone.

d) Saltonstall-Kennedy Act of 1954, as amended - Under this Act, NOAA provides grants or cooperative agreements for fisheries research and development projects addressing any aspect of U.S. fisheries, including, but not limited to, harvesting, processing, aquaculture, marketing, and associated infrastructures.

e) Magnuson-Stevens Fishery Conservation and Management Act - This Act requires NOAA to review activities in marine waters that may have impacts on a managed species or essential fish habitat; aquaculture activities are therefore subject to review under this Act.

2. Policy/Directives

a) U.S. Ocean Action Plan (2004) - The U.S. Ocean Action Plan calls for the United States to advance offshore aquaculture. NOAA has already begun to implement the U.S. Ocean Action Plan by proposing a National Offshore Aquaculture Act (S. 1195), which will provide the Department of Commerce clear authority to regulate offshore aquaculture. The authority of the Secretary of Commerce under this legislation would be delegated to NOAA.

In addition, the U.S. Ocean Action Plan calls on NOAA to:

- assist the private sector in obtaining necessary Federal agency approval for establishing an offshore aquaculture facility, and
- ensure that offshore aquaculture enterprises operate in an environmentally sustainable manner that is compatible with existing uses.

The U.S. Ocean Action Plan was developed in response to the recommendations contained in the final report of the U.S. Commission on Ocean Policy, which called on NOAA to:

- Act as the lead federal agency for marine aquaculture
- Design and implement national policies for environmentally and economically sustainable marine aquaculture
- Develop a comprehensive, environmentally sound permitting, leasing, and regulatory program for marine aquaculture

- Expand marine aquaculture research, development, training, extension, and technology transfer, including a socio-economic component
- Set priorities for research and technology, in close collaboration with the National Sea Grant College Program, states, tribes, academia, industry, and other stakeholders
- Work with the United Nations Food and Agriculture Organization to encourage and facilitate worldwide adherence to the aquaculture provisions of the Code of Conduct for Responsible Fisheries.

b) NOAA Annual Guidance Memos (2004 - present) - NOAA leadership has directed the Aquaculture Program to "create environmental standards and appropriate monitoring and evaluation protocols that will set a new commercial code of conduct for marine aquaculture" (FY2007 AGM) and to provide a "regulatory structure and robust scientific and technical support for marine aquaculture" (FY2008 AGM and draft FY2009 AGM).

c) Department of Commerce Aquaculture Policy (1999) - Under the Department of Commerce Aquaculture Policy, NOAA is to pursue an aquaculture mission that complements and is an integral part of the Department's effort to restore and maintain sustainable fisheries in order to maximize the benefits of U.S. coastal resources.

d) NOAA Aquaculture Policy (1998) - The NOAA Aquaculture Policy (1998) calls for the development and implementation of a successful NOAA program to meet public needs for aquaculture development and environmental protection.

e) Joint Subcommittee on Aquaculture (JSA) Research and Development Strategic Plan - The interagency coordinating body under the National Aquaculture Act of 1980 directs federal agencies, including NOAA, to support development of a globally competitive U.S. aquaculture industry by addressing five major scientific/technological goals:

- Improve the efficiency of U.S. aquaculture production
- Improve aquaculture production systems
- Improve the sustainability and environmental compatibility of aquaculture production
- Ensure and improve the quality, safety, and variety of aquaculture products for consumers
- Improve the marketing of U.S. aquaculture products
- Improve information dissemination, technology transfer, and access to global information and technology in aquaculture.

3. International Agreements

a) FAO Code of Conduct for Responsible Fisheries (1995) - NOAA is responsible for implementing the United Nations' Food and Agriculture Organization (FAO) Code of Conduct for Responsible Fisheries, which calls for the United States to promote responsible development and management of aquaculture.

Specific requirements include:

- establish, maintain, and develop an appropriate legal and administrative framework which facilitates the development of responsible aquaculture
- produce and regularly update aquaculture development strategies and plans to ensure that aquaculture development is ecologically sustainable and to allow the rational use of resources shared by aquaculture and other activities
- evaluate in advance the effects of aquaculture development on genetic diversity and ecosystem integrity, based on the best available science
- establish effective procedures specific to aquaculture to undertake appropriate environmental assessment and monitoring with the aim of minimizing adverse ecological changes and related economic and social consequences
- establish appropriate mechanisms to collect, share and disseminate data related to aquaculture activities to facilitate cooperation on planning at the national, subregional, regional, and global level
- ensure that the livelihoods of local communities, and their access to fishing grounds, are not negatively affected by aquaculture development

b) Bilateral Agreements - NOAA has bilateral agreements for coordination and collaboration with other countries to enhance development of aquaculture and to engage in scientific exchanges, cooperative studies, and data and information exchange. These include:

- United States - Japan Cooperative Program in Natural Resources (UJNR) / Aquaculture Panel
- United States - Norway Aquaculture Cooperation
- Korea Ministry of Maritime Affairs and Fisheries / NOAA Arrangement for Marine Science and Technology Cooperation (Aquaculture Panel)
- United States - China Marine and Fisheries Science and Technology Agreement
- NOAA Fisheries bilateral cooperation agreements with Chile, Mexico, the European

Union, Vietnam and others where aquaculture has been an area of focus for information exchange, cooperative research, and discussion – if not resolution – of trade issues

- Less formal aquaculture agreements with Israel and France

B. Mission Requirements:

The following mission requirements are derived from the requirements in the drivers identified and described above:

1. Establish a comprehensive regulatory program for the conduct of marine aquaculture operations.

    - Primary drivers are: U.S. Ocean Action Plan, National Offshore Aquaculture Act (S. 1195), Magnuson-Stevens Fishery Conservation and Management Act, Coastal Zone Management Act, National Aquaculture Act, FAO Code of Conduct, NOAA Annual Guidance memos, DOC Aquaculture Policy, and NOAA Aquaculture Policy

2. Develop appropriate technologies to support commercial marine aquaculture and enhancement of wild stocks.

    - Primary drivers are: U.S. Ocean Action Plan, National Offshore Aquaculture Act (S. 10095), National Aquaculture Act, NOAA Annual Guidance memos, DOC Aquaculture Policy, NOAA Aquaculture Policy, and JSA Research and Development Strategic Plan

3. Establish and implement procedures for the environmental assessment and monitoring of marine aquaculture activities.

    - Primary drivers are: U.S. Ocean Action Plan, National Offshore Aquaculture Act (S. 1195), Coastal Zone Management Act, National Aquaculture Act, FAO Code of Conduct, NOAA Annual Guidance memos, DOC Aquaculture Policy and NOAA Aquaculture Policy

4. Conduct education and outreach activities to establish a well informed public on marine aquaculture.

    - Primary drivers are: U.S. Ocean Action Plan, National Aquaculture Act, Coastal Zone Management Act, FAO Code of Conduct, DOC Aquaculture Policy, NOAA Aquaculture Policy, and JSA Research and Development Strategic Plan

5. Meet international obligations to promote environmentally sustainable practices for the conduct of marine aquaculture.

    - Primary drivers are: International bilateral agreements, FAO Code of Conduct, and JSA Research and Development Strategic Plan

3. LINKS TO THE NOAA STRATEGIC PLAN

A. Goal Outcomes

The Aquaculture Program supports NOAA's Mission Goal #1 – Protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management.

The Aquaculture Program supports the following outcomes for Mission Goal #1:

- Healthy and productive coastal and marine ecosystems that benefit society
- A well-informed public that acts as a steward of coastal and marine ecosystems

B. Goal Performance Objectives

The Aquaculture Program directly supports the Ecosystem Goal Team's performance objectives to:

- increase environmentally sound aquaculture production
- increase number of fish stocks managed at sustainable levels
- increase number of protected species that reach stable or increasing population levels
- increase number of regional coastal and marine ecosystems delineated with approved indicators of ecological health and socioeconomic benefits that are monitored and understood
- increase number of habitat acres conserved or restored
- increase portion of population that is knowledgeable of and acting as stewards for coastal and marine ecosystems
- increase number of coastal communities incorporating ecosystem and sustainable development principles into planning and management

C. Goal Strategies

The Aquaculture Program supports all five of the Ecosystem Goal strategies:

- Engage and collaborate with our partners to achieve regional objectives by delineating regional ecosystems, promoting partnerships at the ecosystem level, and implementing cooperative strategies to improve regional ecosystem health.
- Manage uses of ecosystems by applying scientifically sound observations, assessments, and research findings to ensure the sustainable use of resources and to balance competing uses of coastal and marine ecosystems.
- Improve resource management by advancing our understanding of ecosystems through better simulation and predictive models. Build and advance the capabilities of an ecological component of the NOAA global environmental observing system to monitor,

assess, and predict national and regional ecosystem health, as well as to gather information consistent with established social and economic indicators.

- Develop coordinated regional and national outreach and education efforts to improve public understanding and involvement in stewardship of coastal and marine ecosystems.
- Engage in technological and scientific exchange with our domestic and international partners to protect, restore, and manage marine ecosystems within and beyond the Nation’s borders.

4. PROGRAM OUTCOMES

The Aquaculture Program has three long-term outcomes:

- Well-managed and productive marine aquaculture in the United States
- A well-informed public that understands NOAA's aquaculture program and has access to information on aquaculture research and industry issues
- Worldwide adoption of environmentally sound marine aquaculture

5. PROGRAM ROLES AND RESPONSIBILITIES

This program is established and managed with the procedures established in the NOAA Business Operations Manual. Responsibilities of the Program Manager are described in the BOM. Responsibilities of other major participants are summarized below:

A. Participating Line Offices Responsibilities

1. NOAA Fisheries operates regulatory programs to support the development of environmentally sound marine aquaculture, conducts in-house scientific research and development on aquaculture and stock enhancement, engages in collaborative research with academic partners, provides leadership for several international and bilateral cooperation initiatives, and provides grants and financial assistance to industry and other partners. NOAA Fisheries also provides leadership for bilateral and international agreements related to aquaculture.

2. NOAA Research supports marine aquaculture research and development through the National Marine Aquaculture Initiative, a competitive grants program that addresses key scientific issues in aquaculture and encourages collaboration among governmental entities, academia, the aquaculture industry, and non-government organizations (NGOs). Through the National Sea Grant College Program, NOAA Research provides direction and support to partners at state Sea Grant institutions engaged in aquaculture research, education, extension, and outreach. NOAA Research also provides leadership for a number of bilateral agreements with other countries, including student exchange programs.

3. NOAA Ocean Service works directly with coastal states through the National Coastal Zone Management Program (CZMP). Through the CZMP, coastal states may receive assistance to plan comprehensively for aquaculture facilities in the coastal zone. Additionally, the Federal Coastal Zone Management Act of 1972, as amended, requires that federal actions that will have reasonably foreseeable effects on the land or water uses or natural resources of a state's coastal zone must be consistent with federally approved state coastal management programs. NOAA Ocean Service also has extensive GIS mapping capabilities that will assist with the identification of particular zones for marine aquaculture.

4. NOAA Satellites and Information plays an important cross-cutting role that supports both NOAA's and the public's interests by collecting, analyzing, and disseminating general aquaculture information and NOAA Aquaculture Program information through the NOAA Library and several websites.

B. External Agency/Organization Responsibilities.

1. NOAA Office of General Counsel – NOAA Office of General Counsel is responsible for providing legal advice to support the NOAA Fisheries' programs with respect to the development of environmentally sound marine aquaculture. Under the National Offshore Aquaculture Act of 2005 (S. 1195), NOAA General Counsel will be responsible for providing legal advice and review in the development of implementing regulations. NOAA General Council will also be responsible for reviewing and clearing permits under the bill.

2. Enforcement Program - Enforcement services are required for the maintenance of a fully operational regulatory infrastructure for marine aquaculture.

3. Sea Grant – Sea Grant institutions throughout the country provide education, extension, and outreach on marine aquaculture.

6. END USERS OR BENEFICIARIES OF THE PROGRAM

1. Aquaculture industry: Industry benefits from the development of a regulatory framework which enables the industry to operate in the Exclusive Economic Zone under known and predictable regulatory requirements. Development of regulatory guidelines for NOAA actions on aquaculture permits provides a basis for industry investment decisions. The Aquaculture Program provides research and development and scientific information for new products, species, and best management practices; acts as a clearing house for information; and assists in developing domestic and international markets for products.

2. Coastal communities: The Aquaculture Program aids in providing jobs, income, and sales opportunities to economically depressed fishing dependent communities.

3. Seafood industry: The Aquaculture Program provides research and development for new products and species, and scientific and policy information. The Program also assists in developing domestic and international markets for products.

4. Commercial fishermen and recreational anglers: The Aquaculture Program provides information on potential effects of aquaculture on existing recreational or commercial fishing activities. The Program's hatchery and scientific work enhances existing wild stocks to improve the quality of the recreational fishing experience and to increase commercial fish stocks.

5. Fishery Management Councils: The Aquaculture Program provides information about potential impacts on wild stocks and disseminates information to aid in understanding the implications of aquaculture development for fisheries management.

6. Federal, state, and local government agencies: The Aquaculture Program provides information, expert advice, and research services to decision makers about aquaculture activities and rebuilding of wild stocks.

7. Academia: The Aquaculture Program provides research grants to answer scientific questions, develop demonstration projects, and study impacts of aquaculture on the domestic economy.

8. Resource managers: The Aquaculture Program provides information to managers about the role of aquaculture in ecosystem management, impacts on wild stocks and the environment, and use of aquaculture technology to accelerate rebuilding of wild stocks. The Program disseminates information to aid in understanding the implications of aquaculture development and stock enhancement.

9. Homeland Security: Regional food supply provided by aquaculture production and wild stocks enhanced through hatchery releases will reduce reliance on imported seafood and the vulnerability of seafood to accidental and intentional contamination.

10. General public: The Aquaculture Program develops education/outreach initiatives.

Appendix – Additional Requirement Drivers

Legislative Authorities:

Anadromous Fish Conservation Act

Columbia River Basin Fishery Development Program
Commercial Fisheries Research and Development Act

Endangered Species Act

Fish and Wildlife Act of 1956

Fish and Wildlife Coordination Act of 1934, as amended
Interjurisdictional Fisheries Act

Marine Mammal Protection Act

Marine Protection, Research and Sanctuaries Act
National Environmental Policy Act

National Sea Grant College Program Act of 1966

Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990

Rivers and Harbors Act of 1899

Title XI, Merchant Marine Act of 1936 as amended

Water Resources Development Act